CLAIMS

1. A catalytic composition, comprising a ~~characterized in that it comprises the~~ product resulting from bringing the following three constituents into contact in any order:

   a) at least one divalent nickel compound;

   b) at least one hydrocarbylaluminium dihalide with formula $AlRX_2$, where R is a hydrocarbyl radical containing 1 to 12 carbon atoms such as alkyl, aryl, aralkyl or cycloalkyl, and X is a chlorine or bromine atom; and

   c) at least one organic Bronsted acid;

   the mixture obtained being pre-conditioned in a solvent, at a controlled temperature and for a pre-set period, prior to its use.

2. A catalytic composition according to claim 1, wherein ~~characterized in that~~ said divalent nickel compound is a nickel carboxylate with general formula:

   $$(R_1COO)_2Ni$$

   where R_1 is an alkyl, cycloalkyl, alkenyl, aryl, aralkyl or alkaryl radical containing up to 20 carbon atoms.

3. A catalytic composition according to claim 1 ~~or claim 2, characterized in that~~ wherein the pK_a of said organic Bronsted acid is a maximum of 3 at 20°C and is a ~~selected from the group formed by~~ halogenocarboxylic compounds with formula R_2COOH where R_2 is a halogenated alkyl radical ~~in particular those which contain at least one halogen atom alpha to the -COOH group, with a total or 2 to 10 carbon atoms.~~

4. A catalytic composition according to claim 3, wherein ~~any one of claims 1 to 3, characterized in that~~ said organic Bronsted acid is a halogenoacetic acid with formula CX_pH_{3-p}-COOH is used where X is fluorine, chlorine, bromine or iodine, and p is a whole number from 1 to 3.

5. A catalytic composition according to claim 4, wherein ~~any one of claims 1 to 4, characterized in that~~ said organic Bronsted acid is trifluoroacetic acid, trichloroacetic acid or tribromoacetic acid.

6. A catalytic composition according to claim 1, wherein ~~any one of claims 1 to 5, characterized in that~~ the pre-conditioning comprises ~~consists of~~ mixing the three constituents in a hydrocarbon or halogeno-
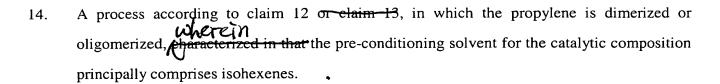
hydrocarbon solvent with stirring and in an inert atmosphere at a controlled temperature of 0°C to 80°C and for a duration of 1 minute to 5 hours.

7. A catalytic composition according to ~~any one of claims 1 to 6, characterized in that~~ *Claim 1, wherein* the mole ratio of said hydrocarbylaluminium dihalide to said nickel compound, expressed as the Al/Ni ratio, is 2/1 to 50/1, and the mole ratio of said Bronsted acid to said nickel compound is 0.25/1 to 10/1.

8. A catalytic composition according to ~~any one of claims 1 to 7, characterized in that~~ *claim 1, wherein* said hydrocarbylaluminium dihalide is enriched with an aluminium trihalide, the mixture of these two compounds having formula AlR_nX_{3-n}, R and X being as defined in claim 1 and where n is a number between 0 and 1.

9. A catalytic composition according to claim 8, ~~characterized in that~~ *wherein* the mole ratio between said hydrocarbylaluminium dihalide enriched with an aluminium trihalide and the nickel compound, expressed as the ratio Al/Ni, is 2/1 to 50/1, and the mole ratio of the Bronsted acid to the nickel compound is 0.25/1 to 10/1.

10. A catalytic composition according to claim 8 ~~or claim 9, characterized in that~~ *wherein* said hydrocarbylaluminium dihalide enriched with an aluminium trihalide is obtained by mixing a hydrocarbylaluminium dihalide with formula $AlRX_2$ with an aluminium trihalide AlX_3. ~~where R and X are as defined in claim 1.~~

11. A catalytic composition according to claim 8 ~~or claim 9, characterized in that~~ *wherein* said hydrocarbylaluminium dihalide enriched with an aluminium trihalide is obtained by mixing dichloroethylaluminium with aluminium trichloride.

12. A process for dimerization or oligomerization of at least one monoolefin, characterized in that said monoolefin is brought into contact with a catalytic composition according to any one of claims 1 to 11.

13. A process according to claim 12, characterized in that the pre-conditioning solvent for the catalytic composition consists of a mixture of olefins with a composition analogous to that of the mixtures obtained by the dimerization or oligomerization reaction.

14.   A process according to claim 12 ~~or claim 13~~, in which the propylene is dimerized or oligomerized, ~~characterized in that~~ *wherein* the pre-conditioning solvent for the catalytic composition principally comprises isohexenes.